S/N: 10/618,937 Reply to Office Action of June 25, 2004

Amendments to the Specification:

Please amend the paragraph beginning on page 5, at line 6 as shown below:

Actuators 36 include various vehicle components which are operated via associated control signals from controller 32. As indicated in Figure 2, various actuators 36 may also provide signal feedback to controller 32 relative to their operational state, in addition to feedback position or other signals used to control actuators 36. Actuators 36 preferably include components related to engine compression braking in addition to as well as a plurality of fuel injectors 46 which are controlled via associated solenoids 64 to deliver fuel to the corresponding cylinders. In one embodiment, controller 32 controls a fuel pump 56 to transfer fuel from a source 58 to a common rail or manifold 60. Operation of solenoids 64 controls delivery of the timing and duration of fuel injection as is well known in the art. While the representative control system of Figure 2 with associated fueling subsystem illustrates the typical application environment of the present invention, the invention is not limited to any particular type of fuel or fueling system.

Please amend the paragraph beginning on page 8, at line 3 as shown below:

As best shown in Figure 3, the method of the present invention may be most conveniently incorporated in a programmable electronic control unit, for example a DDEC 4 controller of Detroit Diesel Corporation. In particular, such controls include digital outputs, for example a starter lockout or overspeed indicator function outputs that switch in response to programmed, threshold value being attained as indicated by the related sensor. For example, the output signal enable and disable thresholds may be programmed, and set as engineering experience may determine. The application code system sets the default function, number and plurality polarity for programming each of the digital input ports and digital output ports. The function of the output ports may be ordered at the time of engine order or configured by a vehicle electronic program system (VEPS) tool or a distributor reprogramming system (DRS) tool. Similarly, the RPM values or the plurality polarity can be set as desired.

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Please amend the paragraph beginning on page 8, at line 16 as shown below:

As shown in Figure 3, the controller enables the digital output 92 when the actual engine speed meets or exceeds the programmed engine overspeed threshold, for example 2300 rpm. The output 92 is coupled to the digital input 94, for example, the output 92 and the input 94 may be clamped to ground, when the overspeed threshold is detected, although the polarity can be programmed as desired. The input 94 of the preferred embodiment may be a torque based governor for control of fuel delivery limited by torque output of the engine. An alternative as shown in phantom line at 96 may be a speed-based governor limiting fuel delivery on the basis of engine speed output. Nevertheless, if the operator maintains throttle actuation, even though the vehicle has crested the hill and begins a downward descent at which engine braking is required, the overspeed indicator controls a throttle inhibit signal so that the throttle actuation point is no longer enabled to control, for example, fuel feed to the engine. [[By]] In addition to grounding the input and enabling the throttle inhibit function to override the operator throttle requests, the control enables engine compression braking, provided that the other criteria such as the engine brake switch on, clutch release switch off, local torque is not zero conditions, are satisfied for engine brake operation.